

REMARKS

The Office Action of October 24, 2007 was received and carefully reviewed. Reconsideration and withdrawal of the currently pending rejections are requested for the reasons advanced in detail below.

Claims 1-7 and 17-28 were pending prior to the instant amendment, of which claims 4-7 and 23-28 have been withdrawn. By this amendment, claims 1, 17 and 20 are amended and new claims 29-34 have been added (see, for example, the feature of claims 29-31 is supported in paragraph [0064], and that the feature of claims 32-34 is supported in paragraph [0061] of the specification). Consequently, claims 1-3, 17-22 and 29-34 are currently pending for consideration, of which claims 1, 17 and 20 are independent.

In the Office Action, claims 1 and 3 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,356,686 to Fujioka et al. (Fujioka); claim 2 stands rejected under 35 U.S.C. § 103(a) as being obvious over Fujioka as applied to claims 1 and 3 above, in view of Japanese Patent No. 05341502A to Sekimoto et al. (Sekimoto); claims 17, 19-20 and 22 stand rejected under 35 U.S.C. § 103(a) as being obvious over Fujioka in view of U.S. Patent No. 6,475,287 to Clark (Clark); and claims 18 and 21 stand rejected under 35 U.S.C. § 103(a) as being obvious over Fujioka and Clark as applied to claims 17, 19-20 and 22 above, and further in view of Sekimoto. Each of these rejections is respectfully traversed in that Fujioka, taken alone or in combination with Sekimoto or Clark, fails to disclose or suggest that which is presently set forth by Applicants' claimed invention.

As set forth in MPEP § 706.02, for anticipation under 35 U.S.C. § 102 the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. Since each and every element, as set forth in the claims, is not found either expressly or inherently described as required by the M.P.E.P., Fujioka fails to anticipate the exemplary features of the present invention, as presently claimed for the reasons set forth below.

With respect to independent claim 1, the Examiner asserts that Fujioka discloses the claimed invention. However, Applicants have amended claim 1 to recite, *inter alia*, the features of "a mask comprising: a mask body having a pattern opening; and a frame, wherein

a material evaporated from a deposition source is deposited on a substrate through said pattern opening of said mask body, wherein said material comprises an organic compound, and wherein said mask body is fixed to said frame in a stretched state and said mask body is adhesively bonded in a location coinciding with a line passing through a thermal expansion center in members of said frame.” Applicants contend that Fujioka discloses an X-ray mask which comprises a mask pattern 4 formed of X-ray absorptive material, but does not teach or disclose the features of a material evaporated from a deposition source is deposited on a substrate through said pattern opening of said mask body, wherein said material comprises an organic compound, as presently claimed. Thus, it cannot be said that Fujioka anticipates the invention as claimed.

With respect to independent claims 17 and 20, the Examiner alleges that it would be obvious to one of ordinary skill in the art at the time the Applicants’ invention was made to have provided the mask frame apparatus of Fujioka in a deposition apparatus for the purpose of selectively depositing onto a deposition substrate as taught by Clark. However, Applicants have amended claims 17 and 20 to recite, *inter alia*, the features of “a mask comprising: a mask body having an opening; and a mask frame, wherein an EL material evaporated from a deposition source is deposited on a substrate through said opening of said mask body, and wherein said mask body is adhesively bonded to said mask frame in a location coinciding with a line passing through a thermal expansion center of said mask frame” and “a mask comprising: a mask body having an opening; and a mask frame, wherein a material evaporated from a deposition source is deposited on a substrate through said opening of said mask body, wherein said material comprises an organic compound, and wherein said mask body is adhesively bonded to said mask frame in a location coinciding with a line passing through a thermal expansion center of said mask frame,” respectively. Clark fails to teach or suggest the features of an EL material evaporated from a deposition source is deposited on a substrate through said opening of said mask body and/or a material evaporated from a deposition source is deposited on a substrate through said opening of said mask body, wherein said material comprises an organic compound, as presently claimed. Thus, Clark does not overcome the deficiencies of Fujioka as discussed above, thus, it cannot be said that Fujioka in combination with Clark makes obvious the invention, as presently claimed.

In addition to the above amendments, Applicants contend that the claimed invention provides significant advantages over prior art references. That is, with the conventional prior art, the utilization efficiency of expensive EL materials in the formation of the EL layer is extremely low, about 1% or less, and the production cost of light-emitting devices is extremely high. However, with the present invention, a large mask with a high mask accuracy can be realized for conducting selective deposition on a substrate with a large surface area. Thus, it is possible to increase the utilization efficiency of EL materials and reduce production cost by using the large mask with a high mask accuracy (see, for example, paragraphs [0007], [0012], and [0218] of specification).

Additionally, with the conventional prior art deposition apparatus, if the substrate or mask is heated during deposition, then dimensions change due to thermal expansion. As a result, the dimensional accuracy and positional accuracy decrease owing to the difference in thermal expansion coefficient between the mask and substrate. However, with the present invention, a deposition position accuracy can be maintained because the mask body is also caused to expand thermally following the expanded state of the substrate. Because the position in which the mask is fixed is the thermal expansion center, the alignment position is not changed even when the frame thermally expands under heating in a certain temperature range and the outer periphery and inner periphery thereof change (see, for example, paragraphs [0009] and [0017] of specification).

As stated above, the present invention provides a mask with a high mask accuracy for evaporating a material comprising an organic compound or an EL material on a substrate with a large surface area.

For the above reasons, Applicants contend that the claimed invention achieves specific advantages, and results in a mask having improved performance characteristics.

Furthermore, Applicants contend that there is no motivation to combine Fujioka and Clark since Fujioka does not disclose the mask for evaporating a material comprising an organic compound or an EL material, and the problem addressed by Fujioka's invention is different from that of Clark or the present invention. Thus, Applicants believe that it is improper for one of ordinary skill in the art to combine Fujioka and Clark.

The Examiner has failed to establish a *prima facie* case of obviousness for at least three reasons. First, the Examiner has not demonstrated how Fujioka, Clark and/or Sekimoto, whether taken alone or in combination, disclose or suggest each and every feature recited in the claims. *See* M.P.E.P. § 2143 (7th ed. 1998). Second, the Examiner has not shown the existence of any reasonable probability of success in modifying Fujioka, the base reference, based on the teachings of Clark and/or Sekimoto, the secondary references, in a manner that could somehow result in the claimed invention. *See id.* Finally, the Examiner has not identified any suggestion or motivation, either in the teachings of the applied references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the apparatus of Fujioka in a manner that could somehow result in the claimed invention. *See id.*

Each of the Examiner's factual conclusions must be supported by "substantial evidence" in the documentary record, as required by the Federal Circuit. *See In re Lee*, 61 U.S.P.Q.2d 1430, 1435 (Fed. Cir. 2002). The Examiner has the burden of documenting all findings of fact necessary to support a conclusion of anticipation or obviousness "less the 'haze of so-called expertise' acquire insulation from accountability." *Id.* To satisfy this burden, the Examiner must specifically identify where support is found within the prior art to meet the requirements of 35 U.S.C. §§ 102(b) and 103. In this case, however, the Examiner has failed to satisfy his burden of demonstrating how Fujioka, taken alone or in combination with Clark and/or Sekimoto, can either anticipate or render obvious each and every one of the limitations present in independent claims 1, 17 and 20, as required by the M.P.E.P. and Federal Circuit jurisprudence.

Fujioka, Sekimoto and/or Clark, taken alone or in combination, fail to anticipate or make obvious the present invention, as claimed. Therefore, Applicants respectfully submit that independent claims 1, 17 and 20 are allowable as discussed previously.

Claims 2, 3, 29 and 32 depend from independent claim 1 and are patentable over the cited prior art for at least the same reasons as set forth above with respect to claim 1.

Claims 18, 19, 30 and 33 depend from independent claim 17 and are patentable over the cited prior art for at least the same reasons as set forth above with respect to claim 17.

Claims 21, 22, 31 and 34 depend from independent claim 20 and are patentable over the cited prior art for at least the same reasons as set forth above with respect to claim 20.

Each of the dependent claims depend from one of independent claims 1, 17 or 20 and are patentable over the cited prior art for at least the same reasons as set forth above with respect to claims 1, 17 and 20.

In addition, each of the dependent claims also recite combinations that are separately patentable.

In view of the foregoing remarks, this claimed invention, as amended, is not anticipated or rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this response, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

In discussing the specification, claims, and drawings in this response, it is to be understood that Applicants in no way intend to limit the scope of the claims to any exemplary embodiments described in the specification and/or shown in the drawings. Rather, Applicants are entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

Should the Examiner believe that a telephone conference would expedite issuance of the application, the Examiner is respectfully invited to telephone the undersigned agent at (202) 585-8100.

Respectfully submitted,

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